# LANGUAGE-SPECIFIC IMPLEMENTATION OF LEXICAL STRESS MAKES DUTCH-ACCENTED ENGLISH HARDER TO UNDERSTAND

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Word stress is implemented differently across languages. In English, for instance, most unstressed vowels are produced with the central vowel schwa, as in 'absurd' (phonological reduction). In Dutch, however, unstressed vowels are realized only slightly more centralized (phonetic reduction). This has been shown to affect listeners' sensitivity to word stress: English listeners strongly rely on segmental identity to identify lexical stress (e.g., Cutler & Clifton, 1984), whereas Dutch listeners strongly rely on suprasegmental cues, such as relative duration and intensity (e.g., Van Donselaar, Koster, & Cutler, 2005). Consequently, English listeners should have difficulties understanding foreign-accented English in which vowels are not phonologically reduced, such as Dutch-accented English (Braun, Lemhöfer, & Cutler, 2008).

We investigated early stages of word recognition during listening to Dutch-accented as compared to native English speech, using a cross-modal fragment-priming paradigm which has previously been shown to be sensitive to stress placement (e.g., Van Donselaar et al., 2005). Listeners heard semantically non-constraining sentences ending in monosyllabic prime fragments (e.g., 'He didn't know the word /ab/)' and performed lexical decisions on visual target words presented at prime offset. Prime-Target combinations did or did not overlap in stress placement (e.g., prime: /ab/ excised from 'absence', Target: ABSENCE vs. ABSURD), or, in a control condition, did not overlap at all (e.g., /fra/ - ABSURD). Besides targets with phonological vowel reduction (e.g., ABSURD), we also included a control target set with words that are not reduced to schwa (e.g., ARCADE), and are hence more similar to the Dutch way of producing unstressed vowels. If our hypothesis holds, the potential difficulties with Dutch-accented English concerning vowel reduction should not arise, or arise to a smaller degree, for this control set.

In accordance with our hypothesis, results show that target words containing reduced vowels (e.g., ABSURD) were responded to faster when preceded by a stress-matching relative to a stress-mismatching or control prime, but *only* when sentences and primes were spoken by a native English speaker. When listening to Dutch-accented English, participants did not show a difference between priming conditions, indicating that listeners could not exploit phonetic reduction as a stress cue. For the 'unreduced' control targets, responses were faster after stress-matching than after stress-mismatching or control primes, but this effect was not modulated by whether the primes were spoken by a Dutch or English speaker. These results show that Dutch-accented English is not harder to understand *in general*, but it is in instances where the language-specific implementation of lexical stress differs across languages.

Bibliography

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